

CLAIMS

What is claimed is:

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1. A method comprising:
 - 2 transmitting data on a first virtual circuit in a network;
 - 3 receiving a message on a second virtual circuit in said network, said
 - 4 message signaling a failure detected in said network; and
 - 5 switching said data transmitted on said first virtual circuit to said second
 - 6 virtual circuit within a predetermined period of time.
 - 1 2. The method according to claim 1, wherein said network is an Internet
 - 2 Protocol (IP) network.
 - 1 3. The method according to claim 1, wherein said network is an
 - 2 Asynchronous Transfer Mode (ATM) network.
 - 1 4. The method according to claim 1, wherein receiving said message
 - 2 further comprises monitoring said first virtual circuit and said second virtual
 - 3 circuit.

1 5. The method according to claim 1, wherein said data is transmitted along
2 one connection of a plurality of connections established in said first virtual
3 circuit.

1 6. The method according to claim 5, wherein a predetermined bandwidth
2 to support said plurality of connections is assigned to said first virtual circuit
3 and said second virtual circuit.

1 7. The method according to claim 1, wherein said predetermined period of
2 time is 500 milliseconds.

1 8. The method according to claim 5, wherein switching said data further
2 comprises transmitting said data related to said one connection on said second
3 virtual circuit.

1 9. The method according to claim 5, wherein switching said data is
2 performed for said one connection of said plurality of connections in said first
3 virtual circuit.

1 10. The method according to claim 5, wherein receiving said message
2 further comprises:

3 detecting a predetermined gap in transmission of said data along said
4 one connection; and
5 discarding said message without switching said data.

1 11. The method according to claim 5, wherein receiving said message
2 further comprises:

3 detecting a predetermined gap in transmission of said data along said
4 one connection;
5 transmitting a data packet signaling said predetermined gap; and
6 discarding said message without switching said data.

1 12. The method according to claim 5, wherein switching said data further
2 comprises:

3 canceling transmission of said data along said one connection in said first
4 virtual circuit;
5 establishing a second connection in said second virtual circuit; and
6 transmitting said data along said second connection in said second
7 virtual circuit.

1 13. The method according to claim 5, wherein receiving said message
2 further comprises:

3 completing transmission of said data along said one connection; and
4 discarding said message without switching said data.

1 14. The method according to claim 5, wherein said one connection is a Voice
2 over Internet Protocol (VoIP) connection.

1 15. The method according to claim 5, wherein said one connection is a Voice
2 over Asynchronous Transfer Mode (VoATM) connection.

1 16. A method comprising:
2 receiving data on a first virtual circuit in a network;
3 transmitting a message on a second virtual circuit and said first virtual
4 circuit in said network, if said data is not received for a predetermined period
5 of time; and
6 receiving said data on said second virtual circuit in said network.

1 17. The method according to claim 16, wherein said network is an Internet
2 Protocol (IP) network.

1 18. The method according to claim 16, wherein said network is an
2 Asynchronous Transfer Mode (ATM) network.

1 19. The method according to claim 16, further comprising:
2 monitoring said first virtual circuit and said second virtual circuit for a
3 second predetermined period of time; and
4 transmitting said message if said data is not received during said second
5 predetermined period of time.

1 20. The method according to claim 16, wherein said predetermined period of
2 time is 50 milliseconds.

1 21. The method according to claim 19, wherein said second predetermined
2 period of time is 500 milliseconds.

1 22. The method according to claim 16, further comprising monitoring said
2 first virtual circuit and said second virtual circuit for said predetermined period
3 of time.

1 23. The method according to claim 16, wherein a plurality of connections is
2 established on said first virtual circuit.

1 24. The method according to claim 16, wherein said data is received along
2 one connection of a plurality of connections established in said first virtual
3 circuit.

1 25. The method according to claim 24, wherein transmitting said message
2 further comprises monitoring said connection for said predetermined period of
3 time.

1 26. The method according to claim 24, wherein transmitting said message
2 further comprises detecting a failure on said one connection in said first virtual
3 circuit.

1 27. The method according to claim 26, wherein said detecting is performed
2 subsequent to receiving a first data packet of said data along said one
3 connection.

1 28. The method according to claim 22, wherein said monitoring is
2 performed subsequent to receiving a first data packet of said data on said first
3 virtual circuit.

1 29. The method according to claim 23, wherein a predetermined bandwidth
2 to support said plurality of connections is assigned to said first virtual circuit
3 and said second virtual circuit.

1 30. The method according to claim 24, wherein said one connection is a
2 Voice over Internet Protocol (VoIP) connection.

1 31. The method according to claim 24, wherein said one connection is a
2 Voice over Asynchronous Transfer Mode (VoATM) connection.

1 32. An apparatus comprising:
2 means for transmitting data on a first virtual circuit in a network;
3 means for receiving a message on a second virtual circuit in said
4 network, said message signaling a failure detected in said network; and
5 means for switching said data transmitted on said first virtual circuit to
6 said second virtual circuit within a predetermined period of time.

1 33. The apparatus according to claim 32, wherein said means for receiving
2 further comprises means for monitoring said first virtual circuit and said
3 second virtual circuit.

1 34. An apparatus comprising:
2 means for receiving data on a first virtual circuit in a network;
3 means for transmitting a message on a second virtual circuit and said
4 first virtual circuit in said network, if said data is not received for a
5 predetermined period of time; and
6 means for receiving said data on said second virtual circuit in said
7 network.

1 35. The apparatus according to claim 34, further comprising:
2 means for monitoring said first virtual circuit and said second virtual
3 circuit for a second predetermined period of time; and
4 means for transmitting said message if said data is not received during
5 said second predetermined period of time.

1 36. A computer readable medium having instructions which, when executed
2 by a processing system, cause the system to:
3 transmit data on a first virtual circuit in a network;
4 receive a message on a second virtual circuit in said network, said
5 message signaling a failure detected in said network; and
6 switch said data transmitted on said first virtual circuit to said second
7 virtual circuit within a predetermined period of time.

1 37. The medium of claim 36, wherein the executed instructions further cause
2 the system to:
3 receive said message by monitoring said first virtual circuit and said
4 second virtual circuit.

1 38. A computer readable medium having instructions which, when executed
2 by a processing system, cause the system to:
3 receive data on a first virtual circuit in a network;
4 transmit a message on a second virtual circuit and said first virtual
5 circuit in said network, if said data is not received for a predetermined period
6 of time; and
7 receive said data on said second virtual circuit in said network.

1 39. The medium of claim 38, wherein the executed instructions further cause
2 the system to:
3 monitor said first virtual circuit and said second virtual circuit for a
4 second predetermined period of time; and
5 transmit said message if said data is not received during said second
6 predetermined period of time.